

Application No. 09/650,626

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-28. (Cancelled).

29. (Previously Presented) A computerized machine control (CMC) monitoring system, wherein said CMC controls the operation of a plurality of digital channels under the direction of a control program, said system comprising:

a data acquisition component, wherein said data acquisition component is in communication with said CMC, and wherein said data acquisition component acquires transition data about said plurality of digital channels;

a data storage component, wherein said data storage component is in communication with said data acquisition component, wherein said data storage component stores the acquired transition data to establish an historical pattern of transition data that is comparable to current transition data independent of the control program; and

a viewing component, wherein said viewing component is in communication with said data storage component, and wherein said viewing component displays a sequence diagram of said historical pattern of transition data defined by a first average transition time to on, a second average transition time to off, and a duration time of said individual

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channel for substantially all of said plurality of digital channels on an individual basis and a sequence diagram of said current transition data.

30-31. (Cancelled)

32. (Previously Presented) The system of claim 29, wherein said historical pattern of transition data of the individual channel in said sequence diagram display is further defined by a statistical window about each of said first average transition time and said second average transition time.

33. (Previously Presented) The system of claim 29, wherein said first average transition time and said second transition time are calculated from a pre-selected reference data set.

34. (Original) The system of claim 29, wherein said sequence diagram of said current transition data and said sequence diagram of said historical pattern of transition data overlay each other.

35. (Original) The system of claim 29, wherein said sequence diagram includes a substantially real-time scrolling cursor.

36. (Original) The system of claim 35, wherein said substantially real-time scrolling cursor stops scrolling at the instant of a downtime event.

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37. (Original) The system of claim 29, wherein said sequence diagram of said current transition data is capable of displaying intermittent failures in said plurality of digital channels.

38. (Original) The system of claim 29, wherein said viewing component displays a digital channel identifier proximate said sequence diagram, wherein said digital identifier is selected from a group consisting of: an imported name, a user entered name, and an address.

39. (Original) The system of claim 29, wherein said sequence diagram provides analog channel data.

40-57. (Cancelled).